

Development of an Educational Tool for State Legislators Regarding CRNA Practice

DNP Final Project

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By

Angela Milosh, CRNA MSN

Graduate Program in Nursing

The Ohio State University

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DNP Final Project Committee

Jodi McDaniel, PhD, RN Advisor

Margaret Clark Graham, PhD, RN, FNP, PNP, FAAN

Karen Ahijevych, PhD, RN, FAAN

Abstract

Introduction. It is important that state legislators in Ohio are knowledgeable about the role of Certified Registered Nurse Anesthetists (CRNAs) in the healthcare system to prepare them for voting on CRNA-related legislation. The purpose of this project was to design a messaging tool containing key information about CRNA practice in the state of Ohio for dissemination to Ohio legislators, and to validate the contents of the tool using a panel of experts.

Project Design. The framework for this project was based on Rogers' Diffusion of Innovation Theory (1962, 1983, 2003; Dobbins, Ciliska, Cockerill, Barnsley, & Dicenso, 2002).

Specifically, this project focused on the first stage of the theory: knowledge. The messaging tool was created in the form of a pamphlet that highlights the educational requirements, scope of practice, geographic distribution, and economic importance of CRNAs in Ohio. The pamphlet was sent to a panel of experts who evaluated the content for accuracy, appropriateness, and relevance to the intended audience.

Results. There was general agreement among the expert panel that the content within the pamphlet was valid. An Item Content Validity Index (I-CVI) and Scale-Content Validity Index (S-CVI) were calculated. Each item had an I-CVI of 0.88-1.00, the S-CVI/Ave was 0.93, and the S-CVI/UA was 0.40. The written responses by the expert panel members were also analyzed and revisions to the pamphlet were made based on the suggested changes.

Discussion. State legislators in Ohio need evidence-based data about CRNAs when presented with CRNA practice related legislation that requires their vote. A pamphlet was developed containing this information, sent to a panel of experts for content evaluation, and revised based on those evaluations. The educational tool is now ready for dissemination to current and future legislators in the state of Ohio.

Chapter One: Introduction

Background and Problem

Certified Registered Nurse Anesthetists (CRNAs) are advanced practice nurses that specialize in the administration of anesthesia care. According to the American Association of Nurse Anesthetists (AANA) 2011 Practice Profile Survey, CRNAs administer more than 33 million anesthetics every year. Nurse anesthetists have been providing safe, high-quality care for more than 150 years. CRNAs provide care in every state in the United States, all branches of the military, and in many foreign countries. They practice in every type of clinical setting in which anesthesia is delivered, and are the primary providers of anesthesia care in the rural United States and the military (AANA, 2011). In the state of Ohio, CRNAs do not practice to their full scope for which they have been trained and educated. This is due to regulatory language in the Nurse Practice Act, Ohio Revised Code 4723.43, section B. State legislators are responsible for laws that govern nursing practice. However, there is a high amount of turnover within the state legislature. Newly elected legislators take office on a regular basis. Therefore, it is essential that present and future legislators have accurate information about the essential role CRNAs play in delivering anesthesia care in Ohio.

One of the goals of the Patient Protection and Affordable Care Act (2010) is to increase patient access to quality, affordable, and timely healthcare services. In order to meet this goal, a healthcare system expanded beyond the traditional physician-led system must be developed. In 2010, the Institute of Medicine (IOM) published a landmark report titled “The Future of Nursing.” The purpose of this report was to provide recommendations for the role of nursing in the transformation of healthcare delivery in the United States. As the largest group of healthcare providers in the U.S., nurses are uniquely positioned to play an influential role in how healthcare

will be delivered in the future. One of the key recommendations in this report is that all nurses should practice to the full scope for which they have been educated and trained (IOM, 2010).

The scope of practice of individual healthcare practitioners has a direct effect on the access, quality, and affordability of healthcare (LeBuhn & Swankin, 2010). When the scope of practice of a practitioner is limited, patients must seek care from more than one healthcare provider to have their healthcare needs met, or may experience limited choice in healthcare providers. If scopes of practice were expanded to include all services that a practitioner is trained and educated to provide, healthcare facilities will have a more flexible workforce to meet the demands of their patient populations. In Ohio, CRNAs must be supervised by physician, and CRNAs do not have prescriptive authority. By expanding CRNA scope of practice to match that of their education and training, patients requiring anesthesia care in Ohio may experience increased access to quality care without duplication of services. This can decrease the cost of delivering anesthesia.

Healthcare costs in the United States are rising dramatically. Since 1960, total health care expenditures have grown by an average of 2.5 percentage points faster per year than the nation's Gross Domestic Product (GDP) (Social Security Advisory Board, 2009). In June 2009, the Council of Economic Advisers, Office of the President, reported that actual spending on a per-person basis rose over 40% between 1998 and 2007, and the portion of GDP devoted to health care spending nearly doubled between 1980 and 2007. The most recent five years of available data (2006-2010) show that total healthcare expenditures, expenditures per person, and ratio of healthcare expenditures to GDP have steadily increased (Center for Medicare & Medicaid Services [CMS], 2012). Between 2011 and 2014, total healthcare expenditures are projected to grow between 3.8% and 7.4% per year (CMS, 2012). Furthermore, the projected

spending between 2015 and 2021 is expected to grow at a rate of 6.2% annually (CMS, 2012), and outpace growth in the GDP by 0.9% (Keehan, Cuckler, Sisko, Madison, Smith, Lizonitz, Poisal, & Wolfe, 2012). If health care costs continue to grow at historical rates, the share of the GDP devoted to health care in the United States is projected to reach 34 percent by 2040 (Executive Office of the President, 2009). If CRNAs were permitted to practice to their full scope, the delivery of care could be maximized to be more efficient and more widely available. This could help decrease the cost of delivering anesthesia care by ensuring adequate access to care, while limiting duplication of services.

In addition to rising healthcare costs, the number of uninsured Americans is also growing. In 2010, approximately 50 million individuals, or 16.3% of the U.S. population, were without any type of healthcare insurance (DeNavas-Walt, Proctor, & Smith, 2012). Although there was a slight decrease in the number of uninsured individuals noted in 2011 to approximately 48.6 million (15.7% of the population), that figure has remained over 40 million since 2007 (DeNavas, et al, 2012). This represents a significant number of Americans who have limited or no access to healthcare services. Healthcare costs within the state of Ohio have also steadily increased. Between 1991 and 2009, healthcare expenditures in Ohio have increased an average of 5.8% annually (CMS, 2012). Additionally, in 2008, a task force commissioned by Ohio Governor Ted Strickland reported that Ohio had 1.3 million uninsured individuals in 2007 (12% of the population) (State Coverage Initiative, 2008). By 2010, the number of uninsured Ohioans rose to 1.5 million (Hoholik, 2011). With the passage of the Affordable Care Act in 2010, it is expected that the number of uninsured patients will decrease, therefore increasing demand for healthcare services. A relative shortage of full-scope CRNAs may lead to both an increase in the cost of providing care, and a decrease in access to care.

The cost of providing anesthesia is a significant contributor to the high cost of healthcare. In 1996, Abenstein & Warner estimated that total expenditures associated with anesthesia services represent 3-5% of total healthcare costs in the United States. Data from the Centers for Medicare and Medicaid Services indicate that allowed charges for the anesthesia specialty account for 1.4-1.6% of government-financed health care expenditures. This figure has been relatively stable for the past two decades (CMS, Medicare & Medicaid Statistical Supplement, 2006-2010). One of the most significant costs of providing anesthesia is the personnel cost of anesthesia providers. The largest portion of the anesthesia budget in hospitals and other surgical facilities is for salaries and benefits (Watcha & White, 1997). One of the factors compounding the budget problems is the relative shortage of anesthesia providers. As hospitals and surgical centers compete to attract providers, the salaries continue to rise. According to a report published in 2010, the demand for anesthesia services combined with an aging workforce has led to a relative shortage of both CRNAs and anesthesiologists. These data were based on data from 2007, the most recent data year available. At that time, there was a nationwide shortage of 1,282 CRNAs (3.8%) and 1200 anesthesiologists (9.6%) (Daugherty, Fonseca, Kumar, & Michaud, 2010). Combining the significant cost of providing anesthesia with a shortage of providers may lead to reduced access to high-quality, affordable anesthesia care. By expanding the scope of practice to match educational preparation, CRNAs will have the flexibility to meet the increased demand for full-scope anesthesia services.

Within the state of Ohio, there are approximately 1850 CRNAs (OSANA, 2012). To date, there has not been a formal, published study conducted within the state of Ohio to determine workforce needs. In 2009, a graduate student at Mountain State University in West Virginia published a thesis identifying current and predicted workforce issues within Ohio

between 2009 and 2014 (Lucas, 2009). This thesis predicted a 13.4% increase in the need for CRNAs between 2009 and 2014. This is equivalent to an additional 98.5 full-time positions (Lucas, 2009). Between 2007 and 2009, it took 3.3-5.5 months to fill a CRNA position in Ohio (Lucas, 2009).

Importantly, there is a significant number of CRNAs in Ohio who provide critical anesthesia services in rural areas. Of the 184 hospitals in Ohio, 34 of them are designated as a Critical Access Hospital (CAH) (Henry J. Kaiser Family Foundation, 2010). A CAH is a small hospital (less than 25 beds), typically located in a rural area. In a study published in 2012, Teske surveyed 31 of the 34 CAHs in Ohio and reported that there are 47 CRNAs employed in these facilities (2012). Approximately 58% (18) of surveyed CAHs do not employ anesthesiologists at all. Their anesthesia services are provided solely by CRNAs. The purpose of the CAH designation is to maintain quality access to primary and emergency health care services, offer adequate health care services that meet the needs of the community, and ensure financial viability of small rural hospitals through enhanced reimbursements from the Centers for Medicare and Medicaid Services. These hospitals were designated as such to make sure Americans in isolated areas would still have access to health care as part of the Balanced Budget Act of 1997. Since CRNAs deliver the majority of anesthesia care in rural and medically underserved areas in Ohio, and are often the sole anesthesia providers, it is vital to ensure that providers have the flexibility in their state-based scope of practice to provide anesthesia care.

Significant contributors to decreased access to full-scope anesthesia care by CRNAs are regulatory barriers to advanced practice nursing (Safriet, 2010). These barriers include state-based limitations of scope of practice and payment and reimbursement policies. The full scope of practice for CRNAs includes the entire perioperative period, from the pre-anesthetic

assessment to post-anesthesia recovery period. According to the American Association of Nurse Anesthetists [AANA] (2010), the scope of a CRNA's practice includes (but is not limited to)

1. Performing and documenting a preanesthetic assessment and evaluation of the patient, including requesting consultations and diagnostic studies; selecting, obtaining, ordering, and administering preanesthetic medications and fluids; and obtaining informed consent for anesthesia.
2. Developing and implementing an anesthetic plan.
3. Initiating the anesthetic technique, which may include: general, regional, local, and sedation.
4. Selecting, applying, and inserting appropriate noninvasive and invasive monitoring modalities for continuous evaluation of the patient's physical status.
5. Selecting, obtaining, and administering the anesthetics, adjuvant and accessory drugs, and fluids necessary to manage the anesthetic.
6. Managing a patient's airway and pulmonary status using current practice modalities.
7. Facilitating emergence and recovery from anesthesia by selecting, obtaining, ordering and administering medications, fluids, and ventilatory support.
8. Discharging the patient from a postanesthesia care area and providing postanesthesia follow-up evaluation and care.
9. Implementing acute and chronic pain management modalities.
10. Responding to emergency situations by providing airway management, administration of emergency fluids and drugs, and using basic or advanced cardiac life support techniques. (p. 2).

Since scope of practice is defined on the state rather than federal level, each state has its own definition of the scope for CRNAs. In the state of Ohio, CRNA practice is governed through the Nurse Practice Act, Ohio Revised Code 4723.43, section B. Ohio law states:

A nurse authorized to practice as a certified registered nurse anesthetist, with the supervision and in the immediate presence of a physician, podiatrist, or dentist, may administer anesthesia and perform anesthesia induction, maintenance, and emergence, and may perform with supervision preanesthetic preparation and evaluation, postanesthesia care, and clinical support functions, consistent with the nurse's education and certification, and in accordance with rules adopted by the board. A certified registered nurse anesthetist is not required to obtain a certificate to prescribe in order to provide the anesthesia care described in this division. The physician, podiatrist, or dentist supervising a certified registered nurse anesthetist must be actively engaged in practice in this state. When a certified registered nurse anesthetist is supervised by a podiatrist, the nurse's scope of practice is limited to the anesthesia procedures that the podiatrist has the authority under section [4731.51](#) of the Revised Code to perform. A certified registered nurse anesthetist may not administer general anesthesia under the supervision of a podiatrist in a podiatrist's office. When a certified registered nurse anesthetist is supervised by a dentist, the nurse's scope of practice is limited to the anesthesia procedures that the dentist has the authority under Chapter 4715 of the Revised Code to perform. (Lawriter, 2005).

In Ohio, CRNAs are required to be supervised by a physician, podiatrist, or dentist in order to provide their services. CRNAs are not required to have a certificate to prescribe (CTP) in order to provide anesthesia care. Currently, CRNAs in the state of Ohio do not practice to the

full scope related to the authority to order medications. A recent interpretation of the Ohio Revised Code indicated that CRNAs do not have prescriptive authority; that is, the statutory authority to order a licensed healthcare provider, such as a Registered Nurse, to administer medications in the perioperative period (Ohio State Association of Nurse Anesthetists [OSANA], 2012). This is contradictory to the recommended scope of practice from the AANA (2010). By restricting full-scope practice through state statutes, the value of CRNAs in the delivery of healthcare cannot be fully maximized. By defining the scope of practice to match the extent of their education and training, CRNAs will have the flexibility to provide full-service anesthesia care to their patients, without requiring the services of another healthcare provider. State legislators are responsible for approving proposed changes to the state law, and therefore need to be fully informed about the implications of restricted scope of practice for CRNAs.

Purpose

The purpose of this project was to develop a content-validated tool to inform Ohio legislators about the critical role CRNAs play in healthcare delivery within the state. Ohio law dictates CRNA practice through the Nurse Practice Act, and Ohio state legislators are responsible for any changes made to state law. Ohio Representatives and Senators are subject to term limits. Ohio Representatives serve two-year terms and may not serve more than four consecutive terms (1-8 years). Ohio Senators serve four-year terms and may not serve more than two consecutive terms (1-8 years). These terms are staggered, with new legislators (and legislative aides) taking office as often as every two years. Because of the ever-changing legislative makeup of the General Assembly, it is important to inform new legislators and remind incumbent legislators of the evidence that CRNAs are skilled, cost-effective practitioners. If

legislators are well-informed about the critical role CRNAs play in healthcare delivery within the state, they will be prepared to make legislative decisions regarding CRNA practice.

Significance

Two bills regarding CRNA practice were introduced in the 129th Ohio General Assembly, which met throughout 2010-2012: Senate Bill (SB) 228, and a companion House Bill (HB) 485. The intention was to clarify the language in the Nurse Practice Act (Lawriter 2005) pertaining to a CRNA's statutory authority to order other licensed providers to administer medications in the perioperative period. Changes to CRNA scope of practice within Ohio requires amendment of the Ohio Revised Code (ORC) 4723.43, section B, known as the Nurse Practice Act (NPA). In order to change this section of the law, state legislators will need to approve the proposed changes. Thus, legislators need to be fully informed about the reason for the proposed change and its potential impact on patient care. However, based on observations of past legislative meetings and conversations with legislators, it is evident that more needs to be done to inform legislators about the essential role CRNAs play in the delivery of safe anesthesia care in the state of Ohio (P. Blakeley, OSANA State Government Relations Committee Co-Chair, personal communication, April 2, 2012).

The opportunity to combine advanced nursing practice with health policy advocacy work correlates well with the role of the Doctor of Nursing Practice (DNP). In 2006, the American Association of Colleges of Nursing (AACN) published a position statement regarding doctoral education for advanced nursing practice. Within this statement are eight Essentials of Doctoral Education that are common to all advanced practice nursing roles. These Essentials are intended to provide a common foundation for all advanced practice nursing specialties to ensure a standard level of competency. This project will align with several of the Doctor of Nursing

Practice Essentials by providing meaningful experiences in two of the Essential areas: Essentials V and VI.

DNP Essential V: Health Care Policy for Advocacy in Health Care is directly relevant to this project. One of the specific outcomes of doctoral preparation is to demonstrate the “ability to educate others, including policy makers at all levels, regarding nursing, health policy, and patient care outcomes” (AACN, 2006, p. 14). By working directly with legislators to increase their knowledge base regarding CRNA practice, this project provides the foundation to advocate for Ohio patient access to high-quality, affordable anesthesia care.

DNP Essential VI: Interprofessional Collaboration for Improving Patient and Population Health Outcomes is also relevant to this project. Two specific competencies identified in Essential VI include “the employ[ment] of effective communication and collaborative skills in the development and implementation of...health policy...” and the use of “consultative and leadership skills...to create change in health care and complex healthcare delivery systems” (AACN, 2006, p 15). Developing educational materials for state legislators that highlight the safe, cost-effective anesthesia care that CRNAs provide may lead to changes in health policies regarding scope of practice for CRNAs and thus improvements in healthcare delivery in the state of Ohio.

Project Objectives

The major goal of this project was to provide legislators with the evidence supporting CRNAs’ critical roles in delivering safe, cost-effective healthcare in the state of Ohio. To achieve this goal, the objectives of this project were to: (1) create a pamphlet containing key data about CRNA practice in the state of Ohio; and (2) validate the contents of the pamphlet using a panel of experts. The pamphlet was revised based on expert panel feedback. The intent was for

the educational pamphlet to be used in the future when meeting with state legislators to discuss CRNA-related policy issues in Ohio.

Chapter Two: Review of Literature

Conceptual Framework

The process of transferring evidence into clinical practice and policy in efficient and effective ways has been studied for many years. Everett Rogers (1962, 1983, 2003) developed and refined a theory about the spread and adoption of new ideas, or innovations. It is known as Rogers' Diffusion of Innovation Theory. Within this framework are five stages of the innovation adoption process: knowledge, persuasion, decision, implementation, and confirmation. In 2002, Dobbins, Ciliska, Cockerill, Barnsley, & Dencso developed a conceptual framework based on Rogers' Diffusion of Innovation Theory. This framework applies specifically to the use and dissemination of research findings in the development of healthcare policy and practice. This project addresses the first stage of the process: knowledge (Appendix A).

The knowledge stage begins with an individual or organization becoming aware of an innovative idea and becoming interested in how it functions. The individual is usually uninformed about the innovation (Dobbins, Ciliska, Cockerill, Barnsley, & Dencso, 2002). Increasing the knowledge level involves dissemination of evidence. This can be accomplished through academic detailing, outreach, audit and feedback, continued medical education (CME), workshops, conferences, publications, and executive summaries. Whatever the method of dissemination, characteristics about the innovation and how it will affect (and be affected by) individuals, organizations, and the environment should be detailed. Within the context of this project, the innovative idea involves the CRNA as a full-scope anesthesia provider and state legislators who are learning about the role of CRNAs in Ohio. This project specifically addresses the first stage in the Rogers' Diffusion of Innovation Theory by developing a tool to inform state legislators about CRNAs. Within the educational tool itself, characteristics about

the CRNAs, their organizations, and the environment in which they provide care is discussed to emphasize the importance of this professional role. The second, third, fourth, and fifth stages of innovation adoption are not addressed in this project, but will provide the basis for future work. It is expected that by providing the information to legislators, they will use the evidence to make informed decisions about scope of practice issues in the future.

Related Research

There is very little in the literature regarding CRNAs and prescriptive authority. The main focus of the few articles that do exist, written by attorneys for the AANA, concentrates on whether CRNA practice involves “prescribing” or “selecting and administering” anesthetic agents during the perioperative period (Blumenreich, 1988; Blumenreich, Stallone, & Tobin 1990, Kaplan, Brown, & Simonson, 2011). It was the opinion of the attorneys that an anesthetic agent administered in the perianesthetic period is not prescribed, but dispensed. Administration of anesthetic agents is a part of the scope of practice of a CRNA, regardless of the authority to prescribe.

Prescriptive authority for CRNAs across the U.S. varies by state. Kaplan, Brown, & Simonson (2011) reviewed the status and rule in each state. It is often unclear how each state interprets “prescriptive authority” in terms of the ability to order perioperative medications. Some states include the authority to prescribe as part of the authority to practice anesthesia, while others authorize or do not authorize the prescription of medications under separate statutory language. These authors determined that all states fell into one of five categories: no prescriptive authority (22 states); prescriptive authority as part of practice authority with no collaboration or supervision required (2 states and the District of Columbia); prescriptive authority as part of practice authority with collaboration or supervision required (2 states);

prescriptive authority separate from practice authority with no collaboration (5 states); and prescriptive authority separate from practice authority with collaboration or supervision required (19 states). In Ohio, it is specifically stated in the ORC 4723.43, section B, that CRNAs is not required to obtain a certificate to prescribe in order to administer anesthesia care. Therefore, in Ohio CRNAs do not have prescriptive authority.

In the state of Ohio, CRNAs do not currently practice to their full scope related to the authority to order medications. The Ohio Revised Code (ORC) 4723.43, section B states “a certified registered nurse anesthetist...may administer anesthesia and perform anesthesia induction, maintenance, and emergence, and may perform with supervision preanesthetic preparation and evaluation, postanesthesia care, and clinical support functions consistent with the nurse’s education and certification, and in accordance with rules adopted by the board. A certified registered nurse anesthetist is not required to obtain a certificate to prescribe in order to provide the anesthesia care described in this division” (Lawriter, 2005). When it was written, the intention of this language was to specify that since CRNAs personally administer medications in the perioperative period, prescriptive authority was unnecessary. Historically, the interpretation of “clinical support functions” has included ordering medications in the perioperative period by delegating medication administration to other licensed healthcare providers, such as Registered Nurses. This was the interpretation of Sue Milne, RN, JD, the Advanced Practice Consultant for the Ohio Board of Nursing (OBN) until 2008 (P. Blakeley, OSANA State Government Relations Committee Co-Chair, personal communication, May 7, 2012).

In 2008, a hospital administrator made an inquiry to the OBN about a statutory interpretation regarding the scope of practice of CRNAs, specifically as it relates to issuing orders for medications (OSANA, 2012). The OBN issued a different interpretation following

this inquiry. The OBN sent a letter to the Ohio State Association of Nurse Anesthetists (OSANA), specifically stating that CRNAs are prohibited under Ohio law from ordering another licensed provider to administer medication (OSANA, 2012). The interpretation of the OBN was that CRNAs can administer anesthesia and related medications, and can perform clinical support functions, but need statutory authority to direct a nurse to administer a medication to the patient. This interpretation was supported by the OBN's legislative counsel, Tom Dilling, JD and the Ohio Attorney General's office in response to an inquiry from the Director of Advanced Practice Nursing, Lisa Emrich, RN, MSN. The interpretation of the ORC as it pertains to nurse anesthesia practice changed with a change in personnel at the OBN (P. Blakeley, OSANA State Government Relations Committee Co-Chair, personal communication, May 7, 2012). In response, the OSANA Board of Directors voted to seek a language change in the nurse practice act that would allow CRNAs to order medications for their patients to be administered by another licensed health care professional (P. Blakeley, OSANA State Government Relations Committee Co-Chair, personal communication, April 17, 2012).

In November 2009, Senator Sue Morano (a Registered Nurse) introduced Senate Bill 200 (SB 200) in the 128th General Assembly. Senators Cafaro, Miller, Kearney, Sawyer, Schiavoni, Turner, and Schaffer cosponsored the bill. Throughout 2010, multiple hearings took place in the Senate Health Committee regarding SB 200. Committee work on SB 200 continued throughout 2010, but the bill was never voted out of committee. Newly elected officials took office after the November 2010 elections, and the 128th General Assembly ended in December 2010 without any action on SB 200 (OSANA, 2012).

The OSANA Board of Directors voted to reintroduce the legislation. In September 2011, the legislation was reintroduced in the 129th General Assembly as SB 228. The original sponsor,

Senator Morano, was not re-elected and could not re-introduce the bill. Senator Burke sponsored the bill, and Senators Schaffer, Lehner, Schiavoni, and Tavares agreed to cosponsor the legislation (Musielewicz, 2011). The bill was then referred to the Senate Health Committee. In March 2012, a companion bill was introduced as HB 485, and was referred to the House Committee on Health and Aging. Several legislators have expressed concern that this is a scope of practice issue, and that they are hesitant to move aggressively with the bills in this legislative session (P. Blakeley, OSANA State Government Relations Committee Co-Chair, personal communication, October 14, 2012). Ultimately, these bills did not make it out of committee prior to the end of the Ohio 129th General Assembly.

On October 22, 2012, the Ohio Board of Nursing requested a formal opinion from the Ohio Attorney (AG) General Mike DeWine. The purpose of this request was to determine whether a CRNA has the legal authority to order or prescribe a preoperative or postoperative medication (such as analgesics or antiemetics) to be administered by another licensed healthcare professional, such as a Registered Nurse or a Licensed Practical Nurse. The status of the Attorney General opinion is currently pending, and is not expected until late spring or early summer 2013. It is expected by OSANA Board of Directors that the AG's formal opinion will be consistent with the most recent interpretation by the Board of Nursing. In anticipation of the AG's opinion, it is expected that each bill will be reintroduced during the Ohio 130th General Assembly in 2013. This provides an opportunity to educate state legislators about the role and scope of CRNAs prior to the reintroduction of the legislation.

Chapter Three: Methods

Project Design

This project was designed to correlate with the knowledge phase of Rogers' Diffusion of Innovation Theory (1962, 1982, 2003; Dobbins, et al, 2002). By disseminating the evidence through a publication and outreach activities, it is expected that the legislators will utilize this information to move into the persuasion and decision-making phases. This project focused on the development of an educational tool to provide Ohio state legislators with information about CRNAs. The educational material was in the form of a pamphlet that included information regarding:

- Who CRNAs are and what they do;
- The educational background of CRNAs;
- The number and distribution of CRNAs in Ohio;
- The scope of practice for CRNAs in Ohio;
- The economic importance of CRNA practice in Ohio.

After the pamphlet was designed, it was sent to a panel of experts for content evaluation.

This project did not require Ohio State University Institutional Review Board approval.

Target Audience

The pamphlet was designed for dissemination to legislators in the Ohio Senate Health Committee and the Ohio House of Representatives Committee on Health and Aging. The members of these committees evaluate, revise, and vote on CRNA-related legislation before submitting the proposed laws to the entire legislature.

Expert Panel

The expert panel consisted of eight reviewers, each with significant experience in either nurse anesthesia practice, state legislative processes, or both. Seven of the reviewers are known professionally by this author. Four of the experts were CRNAs, two of which have significant experience advocating on behalf of the profession. Two experts were attorneys/lobbyists for nurse anesthesia organizations. One expert was an experienced policy educator and advocate at the state level. One expert was a legislative aide for an Ohio state senator.

Expert #1 was a 49-year-old female attorney, serving as a state-level lobbyist and consultant for various nursing organizations. Expert #2 was a 76-year-old female with a doctoral degree, serving as a senior nurse consultant for various state healthcare organizations. Expert #3 was a 57-year-old female with a Masters' degree, employed as a clinically practicing CRNA. Expert #4 was a 57-year-old male with a Masters' degree, employed as a clinically practicing CRNA and director of a nurse anesthesia educational program. Expert #5 was a female over the age of 60 with a Bachelor's degree, and recently retired from nurse anesthesia practice. Expert #6 was a male attorney over the age of 60, serving as a lobbyist for various organizations in Ohio. Expert #7 was a 69-year-old male CRNA with a PhD, employed as an educator. Expert #8 was a 25-year-old male with a Bachelor's degree, employed as a legislative aide to State Senator Nina Turner.

Content Validity Assessment by Expert Panel

Content validity is the assessment of whether the educational material is complete, accurate, and appropriate for the intended audience. It is a measure of inter-rater agreement. The most common method of assessing content validity in nursing research is the Content

Validity Index (CVI), which is based on expert ratings of relevance (Polit, Beck, & Owen, 2007).

Specifics of this process are detailed in the analysis section.

The educational pamphlet (Appendix B) and an introductory letter (Appendix C) were provided to the expert panel, along with assessment questions regarding the relevance of each of the items within the pamphlet. The questions were provided in an electronic format (Appendix D). Six of the experts returned ratings and comments via the online survey, and two of the experts printed out the questions and returned ratings and comments via paper. The panel was asked the following five questions:

When considering the intended audience (state legislators):

1. How clearly does the tool explain who CRNAs are and what their roles are?
2. How clearly does the tool explain the educational background of CRNAs?
3. How clearly does the tool present the number of CRNAs and their geographic distribution in the state of Ohio?
4. How clearly does the tool describe the scope of practice for CRNAs nationally and in Ohio?
5. How clearly does the tool describe the economic importance of CRNAs in the delivery of healthcare in Ohio?

The reviewers were asked to answer each of these questions on a four-point scale: *Not clearly at all*, *somewhat clearly*, *moderately clearly*, and *completely clearly*. There was an optional comment section following each question to provide room for qualitative feedback about the educational tool (Appendix D). The tool was revised based on comments provided by the panel of reviewers (Appendix F).

Analysis

A CVI was calculated for each of the five items (I-CVI). Each point on the four-point scale was assigned a numerical value (not at all clearly = 0, somewhat clearly = 1, moderately clearly = 2, completely clearly = 3). The number of experts rating the clarity as a 2 or 3 (moderately clear or completely clear) was divided by the total number of experts (n) to determine the individual item CVI (I-CVI).

The Scale Content Validity Index (S-CVI) can be calculated in two different ways: first, by determining the proportion of items on the tool that achieved a rating of 2 or 3 (in this case, *moderately clear* or *completely clear*) by every content expert (universal agreement [UA]). This method is referred to as the S-CVI/UA (Polit, Beck, & Owen, 2007). Polit and Beck (2006) identified challenges with the S-CVI/UA approach. They argued that the S-CVI/UA approach was overly stringent, and that universal agreement is more difficult to achieve as the number of experts increases.

The second method averages the five items to determine the S-CVI. This method is referred to as the S-CVI/Ave approach (Polit, Beck, & Owen, 2007). S-CVI/Ave is the computation of the CVI for each individual item, which is then averaged across all items. Polit, Beck, and Owen (2007) recommended a S-CVI/Ave of 0.90. This allows for some items to have complete agreement, and a few items to have a small amount of disagreement. Both methods were used to calculate the S-CVI for analysis purposes, but the S-CVI/Ave calculation was used to determine overall content validity.

Chapter Four: Findings

Results

All eight experts answered each of the five questions about the pamphlet's content by choosing one response (rating) from four choices. Each question was analyzed based on the rating that each expert provided, and the overall CVI of the tool was calculated using both the S-CVI/UA and S-CVI/Ave approach. Narrative responses in the "Additional Comments" section were analyzed for expert insights and suggestions for tool revisions.

Item 1. How clearly does the tool explain who CRNAs are and what their role is?

All eight experts provided a rating for Item #1. Five experts rated it as *completely clear*, two experts rated it as *moderately clear*, and one expert rated it as *somewhat clear*. Seven out of eight experts must rate this item as *moderately clear* or *completely clear* in order to establish content validity beyond the 0.05 level of significance (yielding a CVI of 0.88) (Lynn, 1976). The CVI for Item #1 was 0.88, which meets this threshold.

Item 2. How clearly does the tool explain the educational background of CRNAs?

All eight experts rated Item 2. Seven experts rated it as *completely clear*, and one expert rated it as *somewhat clear*. Seven out of eight experts must rate this item as *moderately clear* or *completely clear* in order to establish content validity beyond the 0.05 level of significance (yielding a CVI of 0.88) (Lynn, 1976). The CVI for Item #2 was 0.88, which meets this threshold.

Item 3. How clearly does the tool present the number of CRNAs and their geographic distribution in Ohio? All eight experts unanimously rated Item #3 as *completely clear*. Seven out of eight experts must rate this item as *moderately clear* or *completely clear* in

order to establish content validity beyond the 0.05 level of significance (yielding a CVI of 0.88) (Lynn, 1976). The CVI for Item #3 was 1.00, which exceeds this threshold.

Item 4. How clearly does the tool describe the scope of practice for CRNAs nationally and in Ohio? All eight experts provided ratings for Item 4. Seven experts rated it as *completely clear*, and one expert rated it as *somewhat clear*. Seven out of eight experts must rate this item as moderately *clear* or *completely clear* in order to establish content validity beyond the 0.05 level of significance (yielding a CVI of 0.88) (Lynn, 1976). The CVI for Item #4 was 0.88, which meets this threshold.

Item 5. How clearly does the tool describe the economic importance of CRNAs in the delivery of healthcare in Ohio? All eight experts provided ratings for Item 5. Six experts rated it as *completely clear* ratings and two experts rated it as *moderately clear*. Seven out of eight experts must rate this item as moderately *clear* or *completely clear* in order to establish content validity beyond the 0.05 level of significance (yielding a CVI of 0.88) (Lynn, 1976). The CVI for Item #5 was 1.00, which exceeds this threshold.

Scale Content Validity. Scale Content Validity (S-CVI) was calculated using both the Average method (S-CVI/Ave) and the Universal Agreement method (S-CVI/UA). The S-CVI/UA was calculated to be 0.40, and the S-CVI/Ave was calculated to be 0.93. The S-CVI/Ave meets the recommended threshold of 0.90, but the S-CVI/UA does not meet the recommended threshold of 0.80.

Additional Comments. Four of the experts provided written comments in the online survey, one expert provided written comments on paper, and one expert provided written comments via email. Two experts (Experts #5 and #6) did not provide any written comments. The complete set of written comments is provided in Appendix E.

Expert #1. When considering expert insight, Expert #1 commented: “You may not want to list as many as 10 scope functions that CRNAs are capable of performing. ...[t]hat list [of functions within scope of practice] may be appropriate for legislators on the Health Committees, those who are just learning about CRNAs may be overwhelmed with the list and thus gloss or skip over it, losing what CRNAs do within their scope. Also, I would caution against saying that CRNAs are less costly to educate and employ than physician anesthesia providers. Some legislators do not respond well to comparisons with physicians and the physicians react rather harshly to this statement. Perhaps a softer way to address this is to reference the cost effectiveness of CRNAs in the health care system without comparing directly to docs.”

Expert #2. The policy expert recommended using fewer medical and educational terms, and provided specific suggestions for ways in which to increase readability and clarity within each section. One specific recommendation included rephrasing the term “advanced practice nurse” so as to minimize confusion with Licensed Practical Nurses.

Expert #3. The clinical CRNA provided positive commentary on readability and flow of information. Specific comments included: “Presented in a pleasing-to-the-eye manner, and good flow of information. Easy to read at appropriate language-to-education level (favorable to be understood by average educated non-medical person).”

Expert #7. Expert #7 recommended adding the following sentence: “CRNAs provide anesthesia in all 50 states, all US military services and in many foreign countries.”

Expert #8. The legislative aide to one of the Ohio state legislators commented on how clear and concise the tool was. Specific comments related to the tool included: “I found the economic importance section to be of particular note. State policymakers so often must decide

how to best allocate scarce resources, and understanding how cost-effective these practitioners are is especially useful.”

Revisions.

Based on the specific feedback from the experts, as well as the I-CVI for each item, the educational tool was then revised. In the introductory section titled *What is a Certified Registered Nurse Anesthetist?*, two changes were made. A sentence was added as recommended by Expert #7: “They [CRNAs] provide anesthesia in all fifty states, all branches of the military, and in many foreign countries.” The second change involved clarification regarding the locations in which CRNAs provide services, and the types of services provided. The additional information states, “They provide care in all [types of] settings, from physician offices to surgical centers to community hospitals to large academic medical centers. CRNAs provide care for patients undergoing all types of procedures, including complex neurosurgery, open heart surgery, and transplants.” These changes addressed the feedback of Expert #7, as well as the I-CVI of Item #1.

The second section, *Educational Preparation of CRNAs*, underwent minor changes to address the comments from Expert #2 regarding clarity as well as the I-CVI for Item #2. The type of licensure required for entry into a CRNA program was restated, the description of the method of education and training during the graduate program was explained in more detail, and the description of post-secondary experience was reworded to state “...seven years of higher education and professional nursing experience.”

No revisions were made to the third section, *Scope of CRNA Practice Nationally and in Ohio*. Based on the I-CVI, this item was rated to be *completely clear* by seven of the eight experts. While Expert #2 rated this item as *moderately clear* and recommended simplifying the language in this section to something less “medical,” this author felt that the description of the

recommended scope of practice was appropriate for the targeted audience: legislators on the health committees in the Ohio Senate and Ohio House of Representatives.

The fourth section, titled *CRNAs in Ohio*, was rated as *completely clear* by all experts, and therefore needed no revision. No experts provided commentary regarding this section.

The final section of the pamphlet, *Economic Importance of CRNAs to Ohioans*, was revised to address the comments by Expert #8, the legislative aide. This expert felt that the content of this section was especially important for legislators to understand due to their concerns about budgetary constraints. This section was revised to provide further clarification and emphasis. The direct comparison to physicians was also removed, as suggested by Expert #1. Additionally, while the I-CVI for this item exceeded the acceptable threshold, two reviewers did not rate it as *completely clear*. Therefore, the bullet points for this section were re-ordered, and a sentence was added on the last bullet to emphasize the importance of CRNAs to rural and medically underserved areas.

Discussion

Due to regulatory language in the Ohio Nurse Practice Act (ORC 4723.43), CRNAs are unable to order medications in the perioperative period, and are therefore not practicing to the full scope for which they were educated. This limits the flexibility to provide the full spectrum of anesthesia care for patients in Ohio, potentially limiting patient access to care and increasing costs. State legislators vote on laws affecting CRNA practice, and need to have accurate information about the role of CRNAs in Ohio. We created an educational tool (pamphlet) that was evaluated by a panel of experts and is now ready for dissemination to Ohio legislators.

The results of the content validity analysis demonstrated that the information contained within the educational tool had an acceptable degree of validity. Lynn (1986) provided guidance

in determining an acceptable I-CVI based on the number of experts. With eight experts, the minimum acceptable I-CVI is 0.88 (Lynn, 1986), which each item in this analysis achieved.

The S-CVI calculation varied based on the method used. The S-CVI/Ave (0.93) met the accepted threshold of 0.90, while the S-CVI/UA (0.40) did not meet the accepted threshold of 0.80. Polit and Beck's (2006) assertion that the UA method is overly stringent was based on the difficulty of getting universal agreement as the number of experts increases. This is evident in the results from this content review: Expert #2 rated three of the five items as *moderately clear* (a rating of 1), while there was universal agreement among the other seven experts for every item. Had the ratings from Expert #2 been excluded, the S-CVI/UA would have increased to 1.00. Based on Polit and Beck's (2006) rationale, the S-CVI/Ave approach was used to determine the degree of content validity.

The results from this content validity analysis suggest that the material contained in the educational tool is relevant, clear, and accurate. The narrative comments provided specific insight into how the material may be received by legislators and ways to improve that reception. Several experts described the difficulties involved in educating others about the practice of nurse anesthesia, and offered specific suggestions on how to improve the presentation of the pamphlet's content. These suggestions were analyzed and considered when revising the pamphlet. The feedback provided by the expert panel emphasized the importance of clarifying how important CRNAs are to the delivery of anesthesia care in Ohio.

With the increasing cost of delivering healthcare services, it is critical that every CRNA has the authority to provide the care for which they were educated and trained to provide. CRNAs have demonstrated a long history of providing safe, effective, affordable anesthesia care. By prohibiting CRNAs from writing perioperative medication orders through statute, they are

unable to provide comprehensive anesthesia care to their patients. By restricting a CRNA's scope of practice in Ohio, access to high-quality, affordable anesthesia care may be limited. In order to ensure that Ohioans have timely access to the anesthesia care they need, the Ohio Revised Code should be changed to expand the scope of CRNA services to match that of their education and training. State legislators must be informed about the role and importance of CRNA-delivered anesthesia care to prepare them to make informed decisions about legislation affecting CRNA practice.

CRNAs in the state of Ohio are currently awaiting the official opinion from Attorney General Mike DeWine's office regarding their interpretation of the Ohio Revised Code. It is widely expected among CRNA leadership within the state that the Attorney General's opinion will be consistent with that of the Ohio Board of Nursing. Therefore, it is likely that legislation will be reintroduced in the 130th General Assembly to clarify language in the Nurse Practice Act to include perioperative medication orders within the CRNA scope of practice. If legislation is reintroduced, legislators on the health committee in both the Ohio House and Ohio Senate will need current, accurate, and clear information about CRNAs and their importance. This pamphlet is intended to be disseminated by Ohio CRNAs when meeting with their senators and representatives to advance nurse anesthesia practice. By presenting valid, evidence-based data about CRNAs to key legislators in the state of Ohio, CRNAs are taking an active role in changing policy to expand their role in anesthesia care – a valuable service they provide to patients throughout Ohio.

Conclusions

The educational tool developed in this project is appropriate to inform state legislators about the role and importance of CRNAs in Ohio. Based on evaluations by a panel of experts,

the material was found to clearly describe the following topics: Who CRNAs Are, Educational Preparation of CRNAs, Geographic Distribution of CRNAs in Ohio, Scope of CRNA Practice Nationally and in Ohio, and Economic Importance of CRNAs to Delivery of Anesthesia in Ohio. This tool is now ready for future CRNA advocacy efforts at the state level.

Chapter Five: Conclusion

Study Summary

An educational tool intended to inform legislators in the state of Ohio about the role of the CRNA in the delivery of healthcare in the state was created. This tool is intended to be used in the future to advocate for full-scope CRNA practice in Ohio. A content validity assessment was completed by a panel of eight experts with significant experience in nurse anesthesia clinical practice, healthcare advocacy, and the policymaking process. The educational tool was found to have an appropriate level of content validity. Based on reviewer ratings and comments, minor revisions to the tool were made to increase clarity and provide more specific information.

Limitations

Content validity was established using a panel of eight reviewers, seven of whom are known professionally to this author. This may have led to some personal bias when evaluating the pamphlet for validity. Expanding the expert panel to include experts in CRNA practice, policy, and advocacy who are unknown personally to this author may eliminate this possibility of bias.

An original pool of eleven reviewers was selected; four of the original experts were Ohio legislators. Three of the legislators did not respond to requests for their expert opinion. The fourth legislator responded through their legislative aide. It would have been especially helpful to have a member of the intended audience provide expert feedback to validate the content of the educational tool. Expanding the panel to include more state legislators may have yielded a better response rate.

Implications for Nursing Practice and the DNP Essentials

Advanced practice nurses, whether prepared through a Masters' degree or Doctor of Nursing Practice degree, must be proficient in advocating for their patients and profession at both the state and federal level. This is particularly important in Ohio, as CRNA practice is somewhat more restrictive when compared to some other states. The content of the educational tool used in this project was found to be valid and clearly presented. There is potential for this tool to be used in the future for advocacy efforts to expand CRNA practice in Ohio to its full scope.

Advanced practice nurses prepared as DNPs are uniquely qualified to advocate for their patients and profession. As the healthcare system becomes more complex, and the delivery of care becomes increasingly evidence-based, DNP-prepared advanced practice nurses will be looked upon to provide their expertise to patients, other healthcare providers, students, legislators, third-party payers, and researchers. By utilizing skills in clinical scholarship, leadership, organization and systems-based thinking, healthcare advocacy, and collaboration, DNPs will influence the delivery of healthcare to promote better patient outcomes that are based on evidence and best practices.

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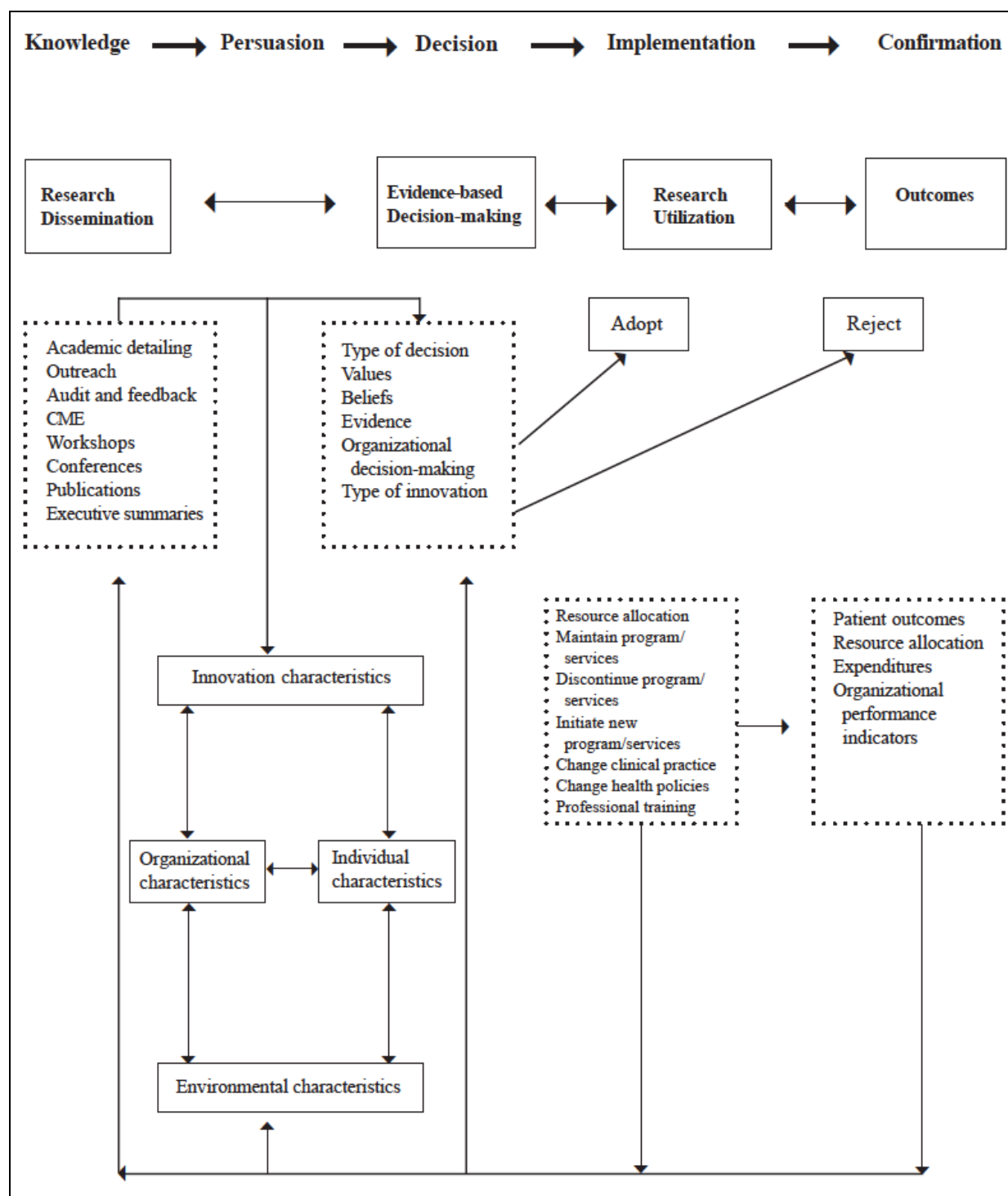
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Appendix A

Framework for Research Dissemination and Utilization.



Appendix B

Original Educational Tool

Certified Registered Nurse Anesthetists

Quality Anesthesia for 150 Years

What is a Certified Registered Nurse Anesthetist?

A Certified Registered Nurse Anesthetist (CRNA) is an advanced practice nurse that specializes in the administration of anesthesia. CRNAs work with other healthcare providers (surgeons, anesthesiologists, dentists, podiatrists, and others) to provide safe, high-quality anesthesia care to patients undergoing a variety of surgical, obstetric, diagnostic, and pain management procedures. CRNAs administer more than 33 million anesthetics to patients in the U.S. each year, and are the primary providers of anesthesia in the rural United States and in the military.

During the course of anesthesia care, CRNAs monitor the patient, provide airway management as necessary, administer anesthetic agents and pain medications, perform nerve blocks if needed for pain management, and treat side effects and complications of surgical and anesthesia care. CRNAs provide care to patients of all ages and settings, from newborns to the elderly.

Educational Preparation of CRNAs

Prior to their anesthesia education, CRNAs have a minimum of a bachelor's degree, an active Registered Nursing license, and at least one year of acute care nursing experience. Graduate education in anesthesia includes 24-36 months of intensive didactic and clinical training at large community hospitals or academic medical centers. Depending on the length of the educational program, graduates are awarded either a masters' or doctoral degree. The graduate then must pass a National Certification Examination in order to practice as a CRNA. In total, it takes a minimum of seven years of education and clinical experience after high school to prepare a CRNA for practice.

Scope of CRNA Practice Nationally and in Ohio

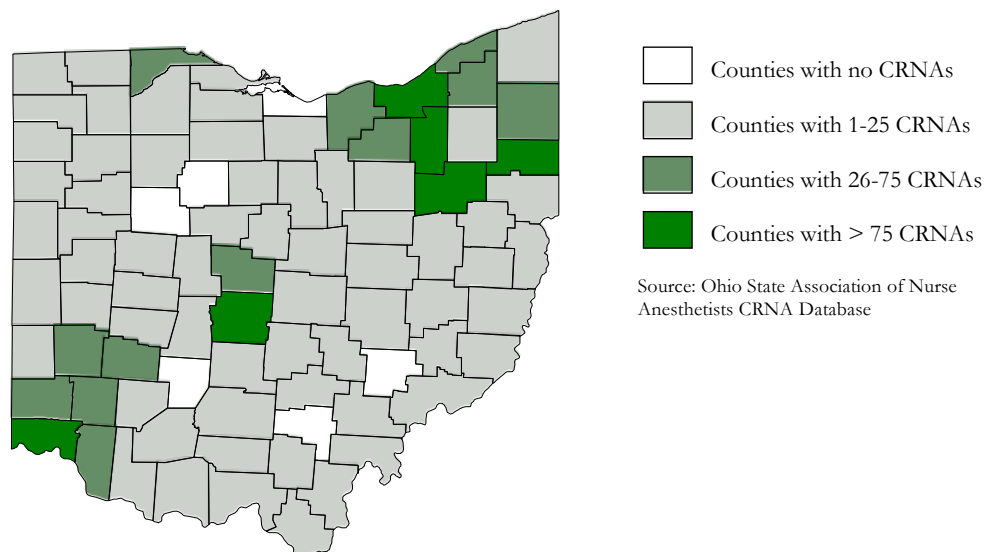
According to the American Association of Nurse Anesthetists, the scope of a CRNA's practice includes (but it not limited to):

1. Performing and documenting a preanesthetic assessment and evaluation of the patient, including requesting consultations and diagnostic studies; selecting, obtaining, ordering, and administering preanesthetic medications and fluids; and obtaining informed consent for anesthesia.
2. Developing and implementing an anesthetic plan of care.
3. Initiating the anesthetic technique, which may include: sedation, local, regional, or general anesthesia.
4. Selecting, applying, and inserting appropriate noninvasive and invasive monitoring devices for continuous evaluation of the patient's physical status.
5. Selecting, obtaining, and administering the anesthetics, accessory drugs, and fluids necessary to manage the anesthetic.
6. Managing a patient's airway and pulmonary status.
7. Facilitating emergence and recovery from anesthesia by selecting, obtaining, ordering and administering medications, fluids, and ventilatory support.
8. Discharging the patient from a postanesthesia care area and providing postanesthesia follow-up evaluation and care.
9. Managing acute and chronic pain.
10. Responding to emergency situations by providing airway management, administering emergency fluids and drugs, and using basic or advanced cardiac life support techniques.

Each state is responsible for determining the scope of practice of licensed individuals within that state. In Ohio, the scope of practice of a CRNA is specified in the Ohio Revised Code (ORC) 4723.43, section B, known as the Nurse Practice Act (NPA). The ORC states that CRNAs can select, obtain, and administer medications to patients, and perform all aspects of perioperative anesthesia care consistent with their education and certification. CRNAs are supervised by a physician, dentist, or podiatrist when performing anesthesia care functions. There is no legal requirement to be supervised by an anesthesiologist.

CRNAs in Ohio

There are more than 1,800 CRNAs in the state of Ohio, representing 4% of the nation's CRNA workforce. They also represent the majority of anesthesia providers in the state of Ohio. CRNAs provide anesthesia care in hospitals, freestanding surgical centers, physician's offices, dentists' offices, VA medical centers, and endoscopy centers. These facilities are located in both urban and rural areas. Depending on the facility, some CRNAs in Ohio work independently of anesthesiologists, and some work with anesthesiologists.



Economic Importance of CRNAs to Ohioans

- CRNAs provide the majority of rural anesthesia in the state of Ohio.
- A recent study demonstrated that anesthesia care provided by a CRNA is the most cost-effective method of anesthesia care delivery¹. This helps to decrease the cost of delivering healthcare.
- CRNAs are less costly to educate and employ than physician anesthesia providers.
- Ohio has 34 critical access hospitals (CAHs), typically located in rural, medically underserved areas in Ohio. More than half of these hospitals employ CRNAs as the sole anesthesia providers. Of the 88 counties in Ohio, 14 counties have CRNAs as the sole providers of anesthesia.

¹Hogan PF, Seifert RF, Moore CS, Simonson BE. (2010) Cost effectiveness analysis of anesthesia providers. Nursing Econ, 28 (3): 159-169.

Further Information

CRNAs have both a national and state professional organization. For more information about the history of nurse anesthesia, professional CRNA practice, and how CRNAs are shaping the future of healthcare, please contact us.

The Ohio State Association of Nurse Anesthetists
17 S. High Street, Suite 200
Columbus, OH 43215
www.osana.org
OSANA@AssnOffices.com

The American Association of Nurse Anesthetists
222 South Prospect Avenue
Park Ridge, Illinois 60068-4001
www.aana.com
info@aana.com

Quality Anesthesia for 150 Years

Appendix C
Letter to Expert Panelists

Angela Milosh, CRNA MSN
31226 E. Landerwood Rd.
Pepper Pike, Ohio 44124
216-896-9882
milosh.2@osu.edu

January 2, 2013

To _____:

My name is Angela Milosh, and I am a Certified Registered Nurse Anesthetist (CRNA). I am also a graduate student at Ohio State University, completing a clinical doctoral degree in nursing practice. My final project is focused on advocating for nurse anesthesia practice at the state level. Specifically, the project goal is to develop an educational tool (handout) to provide state legislators with the current facts regarding nurse anesthesia practice, and the role CRNAs play in the delivery of healthcare in Ohio.

One aspect of developing this handout involves generating an expert panel review of the contents. As someone involved in the state legislative process, you are uniquely qualified to be a part of this panel. Would you be willing to review the handout (enclosed) and answer a brief survey about the contents? The survey contains four demographic questions and five questions about the material contained in the handout. The total time commitment to review the handout and complete the survey is approximately 25 minutes.

The survey may be accessed at the following address:

<https://docs.google.com/spreadsheets/viewform?formkey=dDhhbkxzUTU4ajRHZHIITtkRNU2ZrSUE6MQ#gid=0>

If you have any questions, please do not hesitate to contact me.

Thank you,

Angela Milosh, CRNA MSN
Candidate for Doctor of Nursing Practice
The Ohio State University

Appendix D

Survey

Certified Registered Nurse Anesthetists: Evaluation of Educational Tool

* Required

Gender *

- ☐ Male
☐ Female

Age *

Educational Background *

Please indicate all completed education..

- ☐ High School
☐ Associate's Degree
☐ Bachelor's Degree
☐ Master's Degree
☐ Doctoral Degree or other professional degree
☐ Other:

Profession *

What is your current professional role?

Tool Evaluation *

Please evaluate the educational tool based on the following questions:

	Not clear at all	Somewhat clear	Moderately clear	Completely clear
How clearly does the tool explain who CRNAs are and	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

what their role is?				
How clearly does the tool describe the educational background of CRNAs?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How clearly does the tool present the number of CRNAs and their geographic distribution in Ohio?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How clearly does the tool describe the scope of practice for CRNAs nationally and in Ohio?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How clearly does the tool describe the economic importance of CRNAs in the delivery of healthcare in Ohio?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Additional Comments

Please provide any additional comments regarding the educational tool and/or suggestions for improvement.

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Appendix E
Summary of Expert Comments

Expert #1	<p>You have done an outstanding job! I highly commend your work. Just two small suggestions for consideration if giving this to elected officials at the Statehouse: You may not want to list as many as 10 scope functions that CRNAs are capable of performing. While that list may be appropriate for legislators on the Health Committees, those who are just learning about CRNAs may be overwhelmed with the list and thus gloss or skip over it, losing what CRNAs do within their scope. You may want to keep the list to no more than 5 for general dissemination. Also, I would caution against saying that CRNAs are less costly to educate and employ than physician anesthesia providers. Some legislators do not respond well to comparisons with physicians and the physicians react rather harshly to this statement. Perhaps a softer way to address this is to reference the cost effectiveness of CRNAs in the health care system without comparing directly to docs. You have done a wonderful job on this project--I highly commend your work product!</p>
Expert #2	<p>Too wordy. Use shorter words and fewer medical or educational terms.</p> <p>Information Sheet</p> <ol style="list-style-type: none"> 1. Too many words in each statement--can you shorten? I know they are part of the standards or law or rule, but remember that this page is intended to inform legislators and other policy makers, so use shorter sentences and fewer words. Also, avoid 3-syllable words. 2. Scope: 6. pulmonary status (use a shorter, non-medical term); 7. "emergence and recovery..." (Legislators won't know what you are talking about, so change these words, too. 7. "ventilatory support..." Ditto <p>Tool</p> <ol style="list-style-type: none"> 1. I suggest you re-word the term 'advanced practice nurse.' This fall during the discussions about the 'concussion' bill, a man wrote to the Ohio Boxing Commission stating that 'advanced practical nurses' should not be diagnosing concussions and making decisions about whether or not an athlete could return to play after a concussion. I was stunned--we (nurses) use APN terminology all the time and we know that means a nurse with at least a master's degree. However, this man heard 'advanced PRACTICAL nurse' instead of APN! Of course, he was right--LPNs do not have the education, experience, or legal scope of practice to diagnose a concussion. I think that some of our opponents to nursing issues will pick up on this terminology and use it in the coming months and years to confuse legislators--deliberately. So, is there a way that you can refer to a nurse with a master's or doctoral degree rather than an APN? Also, change "...that..." to "...who..."--that is used for inanimate objects and who is used for people. <p>Educational Preparation</p> <p>This pay [sic] have to be re-written to more clearly emphasize the number of years of CRNA education. Here are my suggestions:</p> <p>A CRNA's college education begins with a 4-5 year bachelor's degree (most BSN</p>

	<p>programs are 4+ years and many students take 5 yrs. to complete), an active registered nurse (not nursing) license, and a least one year experience in acute care. This is followed by 24-36 months in a graduate (master's or doctoral) degree program with intensive classroom (not didactic--they'll never know what that means) and hands-on (not 'clinical'--that is 'nurse-speak') experience at large community hospitals or academic medical centers. Graduates then must pass a rigorous National Certification Exam before they can practice as CRNAs. In total, a CRNA has 4-9 years of college education to prepare for practice.</p>
Expert #3	<p>Presented in a pleasing-to-the-eye manner. and good flow of information. Easy to read at appropriate language-to-education level (favorable to be understood by average educated non-medical person).</p> <p>The role of the CRNA (depending on the target audience) is a challenge to totally describe due to variations within facilities and geographic areas of the state. There are other roles that CRNAs do, e.g. as management, directors of facilities, COO, CEO, etc and this would not probably matter to the lay public (including legislators!) in trying to understand the CRNA anesthesia provider who gives their care in a standard care scenario such as surgery. The stigma of the image of the CRNA being dependent upon a physician to "tell them what to do" persists despite all the PR efforts from AANA/OSANA.</p>
Expert #4	<p>Overall this document clearly states the role and practice of CRNAs in Ohio. I believe it will be helpful for lay people and legislators to understand how CRNAs contribute to health care for patients in Ohio.</p>
Expert #7	<p>Add in first section: CRNAs provide anesthesia in all 50 states, all US military services and in many foreign countries.</p>
Expert #8	<p>Overall, the handout is clear, concise, and very informational. After reading it through, I do feel as though I have a handle on what a CRNA is, what their role is in our state's healthcare system, and what steps one must take to practice this profession. I found the economic importance section to be of particular note. State policymakers so often must decide how to best allocate scarce resources, and understanding how cost-effective these practitioners are is especially useful.</p>

Appendix F

Revised Educational Tool

Certified Registered Nurse Anesthetists

Quality Anesthesia for 150 Years

What is a Certified Registered Nurse Anesthetist?

A Certified Registered Nurse Anesthetist (CRNA) is an advanced practice nurse who specializes in the administration of anesthesia. CRNAs work with other healthcare providers (surgeons, anesthesiologists, dentists, podiatrists, and others) to provide safe, high-quality anesthesia care to patients undergoing a variety of surgical, obstetric, diagnostic, and pain management procedures. They provide anesthesia in all fifty states, all branches of the military, and in many foreign countries. In the United States, CRNAs administer more than 33 million anesthetics to patients each year, and are the primary providers of anesthesia in the rural United States and in the military.

During the course of anesthesia care, CRNAs monitor the patient, provide airway management as necessary, administer anesthetic agents and pain medications, perform nerve blocks if needed for pain management, and treat side effects and complications of surgical and anesthesia care. CRNAs provide care to patients of all ages, from newborns to the elderly. They provide care in all settings, from physician offices to surgical centers to community hospitals to large academic medical centers. CRNAs provide care for patients undergoing all types of procedures, including complex neurosurgery, open heart surgery, and transplants.

Educational Preparation of CRNAs

Prior to their graduate education in anesthesia, CRNAs have a minimum of a bachelor's degree, an active license as a Registered Nurse, and at least one year of acute care nursing experience. Graduate education in anesthesia includes 24-36 months of intensive academic preparation and hands-on clinical training at large community hospitals or academic medical centers. Depending on the length of the educational program, graduates are awarded either a masters' or doctoral degree. Graduates must then pass a rigorous National Certification Examination in order to practice as a CRNA. In total, it takes a minimum of seven years of higher education and professional nursing experience to prepare a CRNA for practice.

Scope of CRNA Practice Nationally and in Ohio

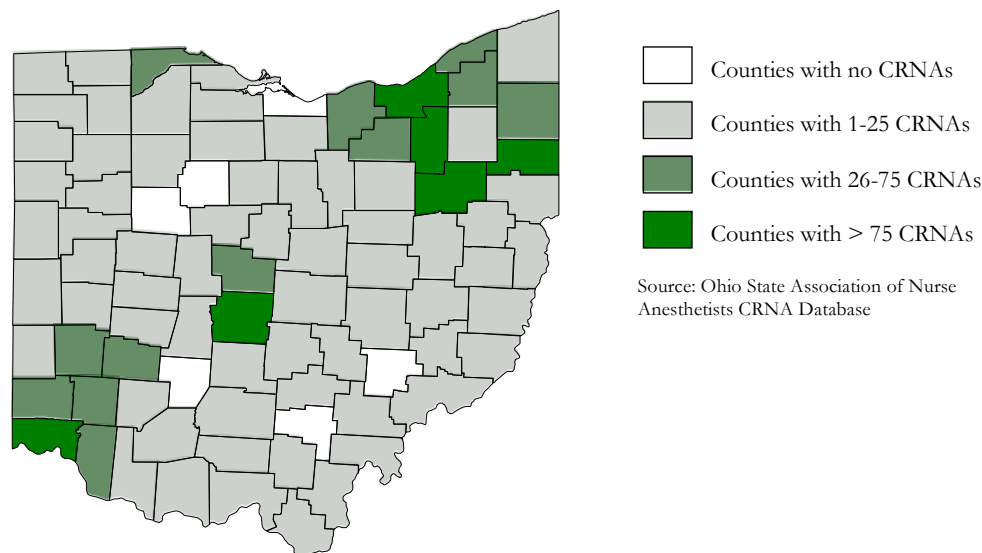
According to the American Association of Nurse Anesthetists, the scope of a CRNA's practice includes (but it not limited to):

1. Performing and documenting a preanesthetic assessment and evaluation of the patient, including requesting consultations and diagnostic studies; selecting, obtaining, ordering, and administering preanesthetic medications and fluids; and obtaining informed consent for anesthesia.
2. Developing and implementing an anesthetic plan of care.
3. Initiating the anesthetic technique, which may include: sedation, local, regional, or general anesthesia.
4. Selecting, applying, and inserting appropriate noninvasive and invasive monitoring devices for continuous evaluation of the patient's physical status.
5. Selecting, obtaining, and administering the anesthetics, accessory drugs, and fluids necessary to manage the anesthetic.
6. Managing a patient's airway and pulmonary status.
7. Facilitating emergence and recovery from anesthesia by selecting, obtaining, ordering and administering medications, fluids, and ventilatory support.
8. Discharging the patient from a postanesthesia care area and providing postanesthesia follow-up evaluation and care.
9. Managing acute and chronic pain.
10. Responding to emergency situations by providing airway management, administering emergency fluids and drugs, and using basic or advanced cardiac life support techniques.

Each state is responsible for determining the scope of practice of licensed individuals within that state. In Ohio, the scope of practice of a CRNA is specified in the Ohio Revised Code (ORC) 4723.43, section B, known as the Nurse Practice Act (NPA). The ORC states that CRNAs can select, obtain, and administer medications to patients, and perform all aspects of perioperative anesthesia care consistent with their education and certification. CRNAs are supervised by a physician, dentist, or podiatrist when performing anesthesia care functions. There is no legal requirement to be supervised by an anesthesiologist.

CRNAs in Ohio

There are more than 1,800 CRNAs in the state of Ohio, representing 4% of the nation's CRNA workforce. They also represent the majority of anesthesia providers in the state of Ohio. CRNAs provide anesthesia care in hospitals, freestanding surgical centers, physician's offices, dentists' offices, VA medical centers, and endoscopy centers. These facilities are located in both urban and rural areas. Depending on the facility, some CRNAs in Ohio work independently of anesthesiologists, and some work with anesthesiologists.



Economic Importance of CRNAs to Ohioans

- A recent study demonstrated that anesthesia care provided by a CRNA is the most cost-effective method of anesthesia care delivery¹. This helps to decrease the cost of delivering healthcare.
- CRNAs are the least costly type of anesthesia provider to employ and educate.
- CRNAs provide the majority of rural anesthesia in the state of Ohio.
- Ohio has 34 critical access hospitals (CAHs), typically located in rural, medically underserved areas in Ohio. More than half of these hospitals employ CRNAs as the sole anesthesia providers. Of the 88 counties in Ohio, 14 counties have CRNAs as the sole providers of anesthesia. This allows patients in rural and medically underserved areas to have access to affordable, high quality anesthesia care.

¹Hogan PF, Seifert RF, Moore CS, Simonson BE. (2010) Cost effectiveness analysis of anesthesia providers. Nursing Econ, 28 (3): 159-169.

Further Information

CRNAs have both a national and state professional organization. For more information about the history of nurse anesthesia, professional CRNA practice, and how CRNAs are shaping the future of healthcare, please contact us.

The Ohio State Association of Nurse Anesthetists
17 S. High Street, Suite 200
Columbus, OH 43215
www.osana.org
OSANA@AssnOffices.com

The American Association of Nurse Anesthetists
222 South Prospect Avenue
Park Ridge, Illinois 60068-4001
www.aana.com
info@aana.com

Quality Anesthesia for 150 Years